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AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY

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We continue

DR. JACKSON'S REMARKS

AT THE TENTH AGRICULTURAL MEETING AT THE STATE HOUSE.

Organic manures are essential to the growth of our cultivated crops. This the experience of ages has proved, and no reasoning on theoretical grounds will ever convince the farmer that he can grow a suceession of crops without them.

The idea that vegetable growth is sustained entirely by the atmosphere, has been recently revived, but has met with no support among practical farmers and careful experimenters and observers.

When the chemist and physiologist have demonstrated that whatever is presented to the rootlets of plants in a soluble state, is taken up by the spongeoles, and enters into the circulation of the plant, and have detected the organic matters of the soil in their various changing states in the sap, it appears absurd to call in question a principle so well established. It has been proved by direct experiment, that fructification will not take place unless the plant is supplied with organic matters. All the mineral salts and gaseous elements may be presented to it, without avail. A green crop may be raised, but no seed will be formed. This has been the result of my experiments, and I believe would be the general result, if equal care had been used to exclude all organic substances from the soil.

If, then, decayed vegetable and animal matters are essential for cultivated crops, what is the best method of introducing them into the soil? The vegetable matters may be obtained either from green crops grown on the soil, animal manures being spread on the overturned sod, or they may be prepared in a mixed state in the farm-yard by composting together animal excrements, both liquid and solid, and vegetable matters of any kind. Peat and swamp muck are the most convenient bases for all composts. Marsh mud and peatty matter from salt marshes, will answer, though the latter is somewhat more difficult to decompose.

Swamp muck is always more soluble than peat, and is less fibrous and more easily decomposed; but it is generally more acid, and hence requires more basic or alkaline matter to neutralize it. It generally contains from 60 to 80 per cent. of vegetable matter, 16 or 20 per cent. of which is soluble in a solution of carbonate of ammonia. From 20 to 40 per cent. consists of earthy and metallic bases and salts.

Peat varies from 95 to 99 per cent. In vegetable matter, 10 or 15 per cent., consist of phosphate and sulphate of lime, with carbonate originally crenate, apocrenate, and humate of lime, magnesia, iron, alumina, and manganese, with a little potash or soda.

Sulphate of iron and sulphate of alumina not unfrequently exist in peat in sufficient abundance to injure vegetation, if they are not decomposed previously by composting or mixing in lime, alkalies, or other bases, capable of uniting with the acid, so as to form a neutral salt, harmless in its nature.

Peat contains besides undecomposed fibre, the following acids, partly united with bases and partly free: Apocrenic acid, Humic acid, Crenic acid, Phosphoric acid, and sometimes Sulphuric acid, united with alumina and ox. of iron, forming an acid of salt. Besides these acids, there is a neutral substance called extract of humus, which is insoluble.

The bases most common in peat are—Alumina, lime, magnesia, manganese, oxide of iron, and a little potash. Phosphate of lime is present in every kind of peat and swamp muck that I have analyzed, and is one of the most valuable ingredients in their ashes.

Swamp muck contains the same ingredients in variable proportions, and may be used in the same manner as peat, in forming composts. It is strange that writers on agricultural chemistry should have overlooked the importance of Apocrenic acid in the nutrition of plants. It is present in all soils, and is the principal soluble ingredient in peat and swamp muck.

While searching for the origin of nitrogen in plants, they seemed to have overlooked the 15 per cent. of that element in this acid. It is much easier to conceive of the decomposition of this substance than that of nitrates of potash and soda, or nitrate of lime, as some supposed takes place in plants.

Crenic acid is also very abundant, especially in subsoils, where it is generally found combined with lime, magnesia, or oxide of iron. It contains nearly 7 per cent. of nitrogen, and furnishes plants with that element. Its salts are generally the most soluble of any of the organic acid salts of the soil. Hence it is readily absorbed by the rootlets, and is found in the sap of trees and in the juices of Indian corn. Owing to the solubility of the the crenates, they are most frequently found more abundant in the *sub*, than in the top soil,—hence one advantage in subsoil plowing. They also are found in pond, spring, and river waters.

Humic acid consists wholly of carbon, hydrogen and oxygen. Its elements are capable of assimulation by plants, and by its oxidation, it furnishes, like other vegeble matter, carbonic acid gas.

The humates of ammonia, potash and soda, are excessively soluble. Humate of lime is less soluble, but is sufficiently so for vegetation. Humate of alumina is nearly insoluble, and humate of iron is less soluble than the crenate of that base—especially the salt of the protoxide.

Extract of humus is a neutral extractive matter, and appears, from my researches, to be a compound of two different substances. It is evidently absorbed freely by plants, since the proportions of it in a soil after growing a crop, were found to be much diminished. It is also found in the sap of plants.

The above mentioned organic acids I have found in soils from every part of the globe, and they may therefore be regarded as universal constituents of all fertile soils. They exist, also, in guano, in the proportion of nearly 32 per cent. one-eighth of which being readily soluble in water, is immediately available to plants, while much of the remainder is gradually decomposed, and is then rendered soluble in the ammoniacal products of the guano.

If a general name is required for the variable mixture of organic acids and their salts in soils, I should prefer the old term *Humus*, which has been restored by Berzelius, who repudiates the name he originally gave it, of *Geine*—a name that seemed to signify a definite compound, and which is, therefore, inapplicable to a *variable mixture*.

Humous is valuable as a manure directly in proportion to the nitrogenious matters which it contains.

The organic acids when not combined with bases, seem to be injurious to plants, as are all free acids. It is necessary, then, to neutralize them by alkalies or alkaline earths.

Nature generally chooses to combine the acids at first with bases, which form with them compounds very slightly soluble in water, in order to preserve them near the surface, where they may undergo changes by influence of the air. Little by little they are oxidated, carbonic acid gas resulting, while the remaining acids acted upon by the alkalies slowly eliminated from the soil by the decomposing power of carbonic acid, dissolve the organic acids out from their earthy and insoluble compounds, and render them absorbable by plants, as they are needed.

Art adopts, in a measure, the processes of nature; but since tillage and larger crops require more manure to be rendered soluble annually, it becomes necessary to form a larger supply, directly in proportion to the wants of the crop to be raised.

In nature, the crops after growing, decay upon the ground, and restore to the soil what they have removed from it, with the addition of carbon they have derived from the atmospheric carbonic acid, and the oxygen and hydrogen they have appropriated from the water—thus repaying the soil with interest added.

When we remove our cultivated crops from the soil, we fail to make compensation to it, and eventually exhaust its fertility. Hence it is necessary to know what we have removed, in order to restore those ingredients again, and we must, in order to profit by our operations, obtain the requisite materials at the cheapest rate.

Those crops which draw most largely from the air their supply of carbonic acid, may be cultivated as green crops, and after their roots are thickly matted, or the grass is bound out, the crop may be turned in. Thus, two or more crops of clover may be cut, and the residual vegetable matter left, will more than supply the loss the field has sustained by the crops taken off. It is only necessary then to restore the saline matters which have been removed, and if we harrow in on the inverted sod as much ashes as the crops removed contained, we are sure the field will have lost nothing. The farmer should do more than this, for *progress* should be his motto, and he ought to render his soil more and more fertile by cultivation.

It is impossible to remove the entire crop by mowing, and it has been found that where a sandy plain had been treated with 200 bushels of leached ashes to the acre, and alternate crops of millet and clover had been taken off, that the soil had gained 29¾ tons of vegetable matter per acre in 8 years. No organic manures had been used in this case, and the increase of vegetable matter came from the roots, stubble and sod left by the mown crops. The leached ashes supplied all the saline matters required, while the organic matter originally in the soil, sustained the crop until it was able to draw more nourishment from air and water.

It should be remembered that green crops when turned in, form vegetable acids, and these must be supplied with bases, either by the soil, or by spreading them on the land. They may either be plowed in, or harrowed in upon the inverted sod. If the manures are not volatile, the latter method is the best, and if the land is deeply plowed, it would be best in all cases to harrow the manure well into the overturned soil, for the soluble ingredients, which are most active, will work their way down fast enough.

Ammoniacal matters containing the phosphates, are the most valuable. Putrid urine is a manure of this class, but it is disagreeable to have it standing in tanks or in the barn-yard, and it is also troublesome to apply a liquid manure, a watering engine being required for the purpose, which few farmers have on hand. Urine, then, should be solidified before it is used, and should be deprived of all odor, for if it gives forth any smell, it is surely losing something, and that something is one of its most valuable ingredients, viz: ammonia.

In order to consolidate the valuable principles of urine, we must select a cheap and efficient method, and the one

I have found to be the best, is to mix together 100 pounds of dry peat and 10 pounds of ground plaster of Paris, or sulphate of lime, and to pour the urine into this mixture until it is saturated. Or swamp muck and marsh mud mixed with a little ground gypsum, may be placed in the barn-cellar, where it will receive all the liquid manure of the stalls. Or still better, we may place the peat or muck in the barn cellar, and each day in cleaning the stalls, the floor may be sprinkled with ground plaster, which will be ultimately swept along with the manure into the peat below. Thus the stalls will be kept free from odor and the gaseous matters will be treasured up for the fields. It will be observed that when manures are mixed with peat and gypsum, they are quite inodorous, and the quality of the manure is much improved. I have found that a half barrel of the above mentioned mixture of peat and gypsum, would retain in an inodorous form, all the urine voided by four men in two years.

When this combination is mixed with a little hydrate of lime, it gives out an abundance of ammonia. On leaching some of it, and evaporating the watery solution, crystals of the sulphate of ammonia mixed with an extract consisting of the crenate, apocrenate and humate of ammonia were obtained.

When it is required to divide the ammonia in this very concentrated manure, with a large quantity of swamp muck or peat, it may be done by mixing it with recently slacked lime, and covering it quickly with raw, moist peat, which will not allow a particle of ammonia to escape.

This mixture of the salts of urine and peat, contains also the phosphates of lime, magnesia, and ammonia, all of which are essential ingredients of corn and the small grains, as also of other plants.

The liquid manures from animals, are more valuable than their solid excrements, and we should endeavor to preserve them in the most convenient manner.

Where peat, swamp muck, or marsh mud cannot be obtained, sods, straw and soil, mixed with gypsum, will answer the purpose.

Guano, either natural or artificial, may be advantageously mixed with peat or swamp muck, which may serve not only to divide that highly concentrated manure, but will also retain its volatile ingredients.

The most common method of making a compost with peat or swamp muck, is to mix three loads of the peat or muck with one load of dung, and to allow the whole, after being heaped up, to undergo putrefactive changes. Then, previous to spreading it on the soil, a bushel of recently slacked lime should be mixed in with each load of compost, or one cask of lime to the above mentioned heap of four loads of mixture. It is essential that the lime should first be slacked until it falls into powder, for lumps of caustic lime become coated over with the compost, and will not slack in it. It is usual to mix in the lime in the spring, about 10 or 14 days before spreading the manure. Where gypsum is known to benefit the soil, it may be advantageously mixed into this compost when the lime is added. The Shakers at Canterbury, are in the habit of digging over their composts by means of a large plow, the compost being spread in a thick bed on the ground.

When night soil and peat are composted together, it is necessary to mix in lime, in order to decompose the mixture, which is then rendered inoffensive. The hemp becomes warm, and gives out only the smell of ammonia, unaccompanied by any offensive stench. Ground plaster should be sprinkled over the heap, to retain that gas—or, if plaster cannot be procured, raw peat or muck will answer the purpose. A mixture of 100 parts of peat and 20 of ground gympsum, is the best disinfecting powder to throw into vaults. It is prepared in this city, at my suggestion, by Mr. Kingsley, at the plaster mills in Butolph street. Lime is a very improper substance to throw into vaults, since it disengages ammonia in great abundance, and increases the disagreeableness of that place.

Some farmers use the raw manure of vaults on their soil. This should be discountenanced as a nuisance highly offensive to travellers in the neighboring highways. The night-soil ought always to be composted before it is used. If spread on grass lands, a portion of it adheres to the stems of the grasses, and is offensive even to cattle. It has no disagreeable properties after it is composted.

Fish are also spread on the soil, and gives forth a most abominable odor. They ought always to be composted with peat or swamp muck, and with soil, if those substances cannot be obtained. A barrel of fish composted with a load of peat, will make it as valuable as a load of clear stable manure. If fish is properly composted, it may take the place of guano, and it may be worth while to try some experiments, to see how concentrated a manure may be made from them. It does not seem necessary that the fish should be first eaten by birds, for by chemical means they may be thoroughly decomposed, and all their products may be retained.

Guano is certainly one of the most concentrated manures, and operates very much like pigeon's dung, when mixed with the soil. When used too freely, or when it is brought in direct contact with the germinating seeds, it kills them, and causes a rapid decomposition of their substance. It is necessary then, to mix it with a large proportion of soil before spreading it, or to dissolve it in a large quantity of water, and disperse it by means of the watering engine. It operates best on the poorest soils, which need saline manures. It contains, as before remarked, the most important elements of plants, and of course supplies them when it is mixed with soil.

[Concluded in our next.]

GUANO AND COMPOST MANURES.

Extract from a letter of Dr. C. T. Jackson.

Guano was first introduced into Europe, and brought to the United States from certain islands near the western coast of South America. It had been extensively employed as a manure by the Peruvian Indians, and was known to them anterior to the conquest by the Spaniards.

It has within a few years become an important article of commerce, and is sought for on the most remote islands of the Pacific ocean, and along the coast of Africa. Thousands of ships are now engaged in transporting it to Europe, where it is extensively used as a manure, and for various chemical and manufacturing purposes. Many have expressed a belief that it would ere long become scarce—if, indeed, it is not destined to be entirely exhausted; for no new supply can be expected when the seabirds which deposite it are destroyed or driven from their customary resting places.

If it should become scarce, so as to considerably increase its cost, it might become an object of importance to manufacture an artificial substitute for it, even if the artificial should cost a little more than the natural guano now sells for in market. I am satisfied that it is an easy matter to manufacture an artificial guano possessing all the fertilizing properties of that now brought from the guano islands; and, if it should be required in large quantities, it might be made and sold at as low a price. Perhaps some variations in its composition may serve a useful purpose, by adapting it to peculiar kinds of soils or to the different crops. For instance: if more organic matter is introduced, it may operate better on soils that are deficient in vegetable substances; and it will also better suit a dry climate, if mixed with swamp muck, or peat, which has the property of retaining moisture. Some soils may already have a sufficiency of certain of the salts that are contained in guano; and then they might be omitted, and others which are required may be introduced in their place. Chemical analysis will determine the ingredients in any soil, and indicate the kind of amendment, or manure, that is required. By analysis of the various crops which are usually raised, it will be easy to discover what ingredients these crops remove from the soil, and, if it has become barren, what will be required to restore it to fertility.

Let us take, for instance, an example calculated by my friend Mr. Owen Mason, of Providence, R. I., who estimates the saline contents of the crops raised by Mr. Adam Anthony, of Providence, R. I., from a field cultivated eight years.

The quantity of salts in these crops he states to be as follows:

	Pounds.
Potash	424 92
Soda	131.92
Lime	532.88
Magnesia	64.08
Alumina	5 96
Silica	390.40
Sulphuric acid	113.88
Phosphoric acid	108.12
Chlorine	58.64
	1.830.80

"It is doubtful," says Mr. Mason, "if the cultivator ever suspected that he carried to his barn two casks of potash, one cask of soda, two casks of lime, a carboy of oil of vitriol, a large demijohn of phosphoric acid, and a variety of other matters contained in his fourteen tons of fodder, which were as certainly stowed away in his mows as if they had been conveyed thither in casks and carboys." This statement will perhaps serve to give some idea of the enormous quantities of saline matters that are removed from the soil by the crops ordinarily raised. When the crops are eaten on the farm, and the manure produced therefrom is returned to the soil, there is established a continued circulation of those ingredients which would be lost if the crops were removed and sold; or, if animals are raised on the farm and sold, they carry off a part of the farm in the form of phosphate of lime composing their bones, and in the salts which enter into the composition of their various solids and fluids.

Tobacco, being an article generally sent abroad, is said to exhaust a soil. Now, if this is the case, (as I understand it is,) by knowing what the plant carried away from the soil, and restoring it again, we should reclaim it from barrenness. The same remark will apply to other crops that are removed and sold.

Let us see, now, what ingredients are found to exist in natural guano from the coast of Peru, and see how far they will go towards restoring the saline matters to the soil. The following is an exact analysis of the Peruvian guano by Vœlcke. (See *Bulletin Universal de Geneve* for November 17, 1841.)

Urate of ammonia	9.0
Oxalate of ammonia	10.6
Oxalate of lime	7.0
Phosphate of ammonia	6.0
Phosphate of ammonia and magnesia	2.6
Sulphate of potash	5.5
Sulphate of soda	3.8
Muriate of ammonia	4.2
Phosphate of lime	14.3
Clay and sand	7.4
Undetermined organic substance, one-eighth of which is soluble in water	32.3
Soluble salts of iron and water	
	100.0

In this analysis, the nature of the organic substances (amounting to 32 per cent.) was not ascertained; and believing that it was important to ascertain their nature, an analysis was undertaken by one of my pupils, in order to discover them; and they were found to consist of the usual organic acids of fertile soils, combined with bases, and principally with ammonia. They proved to be the crenic, apocrenic, and humic acids, and extract of humus —substances which enter the roots of plants by absorption, and are doubtless assimilated by their peculiar action. The salts in guano undergo changes in the soil, the urate of ammonia soon being converted into the carbonate of that alkali; therefore, we may replace the urate in an artificial guano by carbonate of ammonia, or, still better, by the humate or apocrenate of ammonia; both of which are permanent, and are soluble in water.

I observed that the European chemists who had given formulas for making artificial guano, had omitted the vegetable organic matters, and that the artificial compound rarely proved equal, in fertilizing properties, to the natural. With a view to test the questions as to the influence of the vegetable organic acid compounds, I made various kinds of artificial guano; and that which proved to be the best, contained a considerable proportion of them. The following is a formula of the best kind:

	Lbs.	*Cts.*		*Estimated cost in the large way* *Cts.*
Phosphate of lime (burnt bones)	15	at ½	per lb.	7½
Carbonate of ammonia	10	" 6	"	60
Phosphate of soda	10	" 4	"	40
Sulphate of magnesia	6	" 3	"	18
Muriate of ammonia	5	" 9	"	45
Sulphate of soda	3	" 1	"	3
Sulphate of potash	5	" 3	"	15
Nitrate of soda*	5	" 4	"	20
Nitrate of Potash	2	" 6	"	12
Humate of potash†	20	" 3	"	60

*The operator may use nitrate of potash (saltpetre) instead of nitrate of soda, with equal effect.

†Humate of potash is made by melting sawdust, or any other vegetable fibre, with a very strong solution of caustic potash in an iron pot.

Apocrenate of ammonia‡ -	10	" 4	"	40
Oxide of manganese -	5	" 2	"	10
Bog iron-ore - -	2	" 1	"	2
Fine silica, *ad lib.*				
	100			$3 32½

I have tried the artificial guano on potted plants, and have found it to be superior to the natural guano of Peru.

It is requisite, in the use of either kind, to employ but a little at a time, and it should be well mixed with earth, and the plants should be watered soon after it is applied. It operates best on poor sandy soil, or yellow subsoil. I have grown healthy plants in pulverized quartz, using only this guano and water, while they would not thrive when I tried them in the pure quartz with water alone. I grow'd clover, wheat, oats, rye, barley, Indian corn, beans, peas, and many other plants, in a weak solution of the organic salts, like those introduced in this guano, and they were pale and sickly, and soon died. It was noticed, as has been remarked by De Seure, that the color of the solution in which the plants were grown gradually diminished, proving its absorption by the plants.

Those who carry on farming in a large way cannot have time for nice chemical experiments; and if artificial guano is manufactured, it must be made in large chemical establishments near cities, where the ammoniacal matters of the gas-works and from urine may be employed.

The farmer may, however, gain much by attending to the advice of chemists, for they can teach him to save much that is now too often wasted. He may by knowing that a mixture of 100 pounds of peat or swamp muck and 20 pounds of gypsum, or plaster of Paris, will absorb an enormous amount of urine, without being in the slightest degree offensive; and by this operation he may not only consolidate a valuable manure, but, at the same time, do a public service by removing a nuisance. He has only to place his casks in certain places, and he will soon have them charged with ammoniacal salts, which will prove highly fertilizing to the soil. The same mixture will remove all unpleasant odors that are given out by vaults, and will consolidate their ammoniacal matters in the states of humate, apocrenate, and sulphate of ammonia; while the lime, formerly a sulphate, will be converted into a carbonate of lime, and will serve as a useful manure.

A hundred weight of this mixture of peat and ground plaster will consolidate, in an inodorous form, all the urine from four persons for a year at least; and this compost contains, besides the mentioned ammoniacal salts, all the phosphates, sulphates, and hydro-chlorates which are contained in urine. The liquid manures of the stalks may be economized in the same way. The farmer who happens to live where fish can be obtained abundantly, need not purchase guano; for he can obtain it before it has passed the intestines of birds, and, by a little management, may consolidate and preserve all the ammoniacal fumes, which the slovenly farmer allows to escape, so as contaminate the pure sweet summer breeze with an abominable stench. Let him then mix his fish with swamp-muck, peat, wood scurf, or any other decomposed vegetable matter, sprinkling in a little ground gypsum; to take up the gases after putrefaction has begun. He may hasten the process by mixing in recently slacked lime; and, quickly covering the heap with peat and gypsum, he may keep in the ammoniac, and have an almost inodorous heap of valuable compost. If to this he adds a little nitre or nitrate of soda, and a little sea-salt, he will have a very good substitute for guano, without the aid of sea-birds of ropical climes.

In the interior, the farmer should make all his dead animals, and the refuse of the slaughter-house and tannin, into a similar compost. He may supply the place of fish bones by mixing in ground or burnt horn piths and bones of animals. These hard substances are best converted into powder by following a method suggested by Mr. Levi Bartlett, of Warren N. H., who breaks bones and horn-piths into pieces with an axe, and then boils them in the refuse liquors of potash works until they fall to powder; after which, the whole bony matter and the liquid are thrown into the compost heap. A mixture of sulphate of potash and caustic potash lye will effect the entire decomposition of bone, phosphate of potash and sulphate of lime resulting; besides which, a quantity of soap is formed, and the oily and gelatinous matter of the bones is a good manure. These are all good articles for the compost-heap; and if farmers generally paid more attention to the principles of chemistry, they might manufacture all the manures they require, and waste but little of those things which are required to fertilize the soil.

Very respectfully your o'b't servant and friend,

CHARLES T. JACKSON.

Hon. H. L. ELLSWORTH,
Washington, D. C.

‡Apocrenate of ammonia, for this mixture, may be made by saturating peat, or swamp much, with a solution of carbonate of ammonia; when the whole may be mixed with the other ingredients.

FOR THE DORCHESTER (MD.) FARMER'S CLUB.
Published by order of the Club.

Requested under a resolution of the last Club meeting, I submit to them a few additional remarks, in support of the mode of the culture of Indian corn, indicated in my last paper, on that subject.

It will be unnecessary for me, before the members of this club, to urge the point of the indispensable necessity of the presence of Nitrogen, for the perfection of all plants designed for animal sustenance—it is sufficient to demonstate, that the sources of this essential, elementary material, are more economically appropriated under that culture, than by the usual practice of recent plowing, and *cross* plowing, &c. &c.

The two great sources of this useful element, are 1st. the direct product of all organic bodies, in a state of decomposition—united with Hydrogen, in the form of Ammonia; and with Oxygen, as nitric acid—2nd. the indirect supply from the atmosphere, at large, when it has been diffused, from bodies decaying, on the surface of our lands.

From the infinite accumulation of these materials, it is unquestionable, that the atmosphere must be loaded with these gaseous products, as well as with all other vaporable substances—and it is equally so, that being soluble in water, they will of necessity mix, and descend with the rain, and snow, which may fall upon the earth, from the regions in which they were floating.

Notwithstanding this obvious necessity, of the presence of these gases, and others, occasioned by the causes named, yet, being not apparent to the senses, Farmers, indeed in *general*, will not acknowledge the fact; and many others do not appreciate their *quantity*; which, at the first falling of rain, or snow, and especially after their long suspension, is greater than would be imagined, without actual examination—as I assure you, I have frequently witnessed, on analysis, for *my own assurance* and *gratification*.

I have alluded to this important fact, in my former paper, and I renew it, with the more earnestness, because it forms the chief basis, or principle of the mode of culture therein advocated; and if admitted, the conclusion is unavoidable, that, as before explained, it is better adapted to economise the atmospheric supply of vegetable nutriment, as well as to prevent the waste, by dissipation of the products of the decomposing sward, than the usual practice of recent, and cross ploughing.

The *soil*, too, will be improved, not only by the artificial *fixity*, given to these volatile substances—the gases—but by the salts and alkalies of the putrescent sward which is placed and preserved in a condition to promote fermentation.

In point of *fact*, results have accorded to theory a large share of corroboratory evidence.

Tho' motives may be misconstrued, I will venture in aid of the problem I have proposed for solution to adduce cases of results, in comparison with those of the usual methods—for which I refer to the publications of the facts—sct. in the Delaware Advertiser, Wilmington; —and in the American Farmer, Baltimore.

The first named paper notices a sweep-stake, made up by several gentlemen in Delaware, who admitted me, as a member—for the best crop of Indian corn, on one acre; —the Am. Farmer, perhaps more accessible, also published it, at the same time—1829, vol. 11, p 314; my method then, differed from the present, only in the planting of *double*-drill; and one plant left in place of single drill and two left, which latter I have found to be preferable;—I think, too, in one deep bar furrow, which I have discontinued.

The product of my acre was something more than one hundred bushels shelled corn—and I obtained the stake —a silver pitcher;—I understood that my competitors all *cross plowed*.

The files of the Am. Farmer, also, in 1827 vol. 9, page 257, contains a notice of my success, in a competition for two premiums offered by the Md. Agricultural Society—for the best products of Indian corn, on ten acres, and on five acres; both of which, I had the gratication to receive —in evidence of the preference of my mode of culture—which gave me ninety bushels per acre on the five acres —and seventy six per acre on the ten.

On the second—the Maryland case, there happened a considerable drouth—and my neighbours predicted destruction to my crop—but it suffered less than theirs, which was cross plowed; which is well attested by a sweep stake silver pitcher inscribed to that effect—which I received from them; and several of you gentlemen happen to be of the number, that made the handsome contribution; and I hope, that we may long live to enjoy the festive libations of that, and similar trophies, which you have obtained, on similar occasions—for similar achievements, on that arena of competition, where victory leads to the comfort and happiness of mankind.

The inveteracy of custom and prejudice, may long continue the practice of recent, and cross plowing—but I beg of you generally, to make the experiment, fairly, on a small square of your fields, if you please; and I am fully convinced, you will find the results, which I have stated, and the reasons, on which they were founded most fully and satisfactorily sustained.

This inveteracy of custom, and prejudice has done much to retard the onward march of agriculture; and while its influence continues, it is a vain hope, that we shall see in general practice, a system based on principles of science and unerring philosophic induction;—while this impediment continues, the charge of "*Book-learning*" will be, as it now is, a popular theme of derision; a synonim of folly with the most of our Farmers;—while it continues, the fact of *printing* or *writing down* an established truth, will be, as it now is, enough to discredit it, with a large class of our countrymen at home, and abroad, possessing in other respects, an ordinary sagacity; it is our *business* —it is our *purpose* to ameliorate this unfortunate condition of fatuity—and teach by *ocular process*—by *results*, which may be *viewed* in *comparison* that they have not attained that *ultimate principle* of skill, which they fancy they have, innately, derived from their forefathers and that one higher step may yet be taken by them to advantage; —if successful in the reclamation, we may claim a portion of public gratitude,—if not, yet by the *effort*, we have performed our duty.

JOSEPH E. MUSE.

Balls of wool in Lambs stomachs—Lambs which are dropped in the winter, frequently exhibit a habit of chewing and swallowing locks of wool which they pull from their mothers and other sheep. From this wool, balls are sometimes formed in the lambs' stomachs, which it is supposed occasions their death. In the Maine Farmer, Maj. E. Wood mentions a case of this kind, having happened in the flock of his son, Mr. T. Wood. This unnatural habit of lambs seems to be caused by a desire to fill the stomach with some bulky substance on which it may ruminate, or chew the cud; and not finding its natural food for this purpose, it is induced to swallow the indigestible wool. The trouble would no doubt be prevented by giving the lambs suitable hay with turnips or potatoes, and feeding the ewe with those substances which would prevent the milk from having a costive tendency. We have frequently reared lambs in winter, but have been careful in providing suitable and abundant food, and never had them troubled with wool in the stomach.—*Alb. Cult.*

DOMESTIC ECONOMY.

Corn Cake.—Two teacups of buttermilk, one of sour cream previously sweetened with saleratus, one tablespoonful of molasses, and Indian meal to make it nearly as stiff as muffins. Bake half an hour. Thoroughly tried by an excellent housekeeper, and found first rate; and also eaten with good *gusto* by the writer.

Demestic Yeast.—The following is copied from the London Gardener's Chronicle, and must be cheap and easy. Boil one pound of good flour, quarter of a pound of brown sugar, and a little salt, [how much is that?] in two gallons of water, for an hour. When milk warm, bottle it and cork it closely, and it will be fit for use in twenty-four hours. One pound of this yeast will make eighteen pounds of bread.—*Albany Cult.*

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

REMOVAL.

☞ *The premises on which our office was located, is in process of improvement, and we have consequently been compelled to remove—We may now be found at the N. E. corner of Charles & Baltimore sts. (entrance in Charles street) over the Auction Room—where we shall be happy to attend to the calls of our friends.*

☞ In consequence of our removal, the publication of the present number of the "*Farmer*" has been delayed beyond the regular day.

Subsoil Ploughs—Sub-soil Ploughing.

We perceive that the editor of the "Valley Farmer," published in Winchester, Va. is advertising our enterprising townsmen, Messrs. *R. Sinclair, jr. & Co's.* "Subsoil Ploughs." This reminds us of a trial we saw with one of them some eighteen months ago—a trial which not only convinced us of its great utility as an implement of husbandry, but of the peculiar excellence of the one manufactured by these gentlemen. Their subsoil plough is an improvement upon the Scotch sub-soil plough, combining all its principles, but so lessened in weight, and simplified in construction, as that, while it reduces the friction, it overcomes resistance, and so decreases the burthen to the team, as to render its operation, in their improved plough, easy labor, whereas the original Scotch one, is so ponderous in dimensions, and so complicate withal, in its parts, as to be burthensome in the extreme, both to the team and teamster. With a team of two horses, following in the track of the plough, it will penetrate 8 or 9 inches into the subsoil beneath the bottom of the surface furrow; and, without turning up a cubic inch of the earth, it shakes and pulverizes it to the depth we have named. Thus preparing, as it were, a second bed for the *pasturage of the plants*, and, to that extent, opening the soil to the meliorating influence of the sun and air, and bringing the potash, and other mineral salts, which, in clays, always lie buried beneath the surface soil—and which, of course, is of no avail to the purposes of vegetation, until brought into action by subsoil ploughing.

By cultivation, the potash on the surface, originally existing in most soils, is taken up by the growing plants, and unless such soils be periodically *ashed*, in the course of a series of years, that portion of the land within the reach of the roots, must become deprived of this necessary element of its fertility, and hence it is, that soils which were once renowned for their wheat-producing qualities, cease to yield that grain in such quantities as to render its culture profitable. Without potash be present, the sand of the soil cannot be dissolved, and as that is the essential principle in the formation of the outer crust of corn-stalks, as well as that of all the families of small grain, as wheat, barley, rye, &c. the exhaustion of cultivation must either be supplied by the application of *ashes*, or some other alkaline substance possessing the attribute of dissolving the sand, and forming the compound called the silicate of potash, or the culturist must draw upon the *subsoil* for a supply. Hence, then, it is obvious, that there is no other way left, of procuring such supply from beneath the surface, in the first instance, but by breaking up the *subsoil*, and bringing it within the *indirect* chemical action of the solar and atmospheric influences, and ultimately of turning portions of it up to be *directly* acted upon by the same powerful agents; thereby not only commingling an important ingredient with the theretofore exhausted surface soil, but deepening the bed of the plants, and thus enhancing the range whence they derive their sustenance.

If the subsoiling of land was productive of no other good effects than those we have alluded to, it would be worth four times the cost it may occasion. But there are other beneficial resulting effects. In *moderately* moist lands, by the process of percolation, which it encourages and augments, subsoiling serves to relieve the roots of the superabundance of water which, in tenacious clays, always abound, and imparts to them the medium of healthful existence. We mention in this connection "moderately moist lands," because where they may be what is technically called *wet lands*, subsoiling might prove not to be an effectual means of draining, and it might be found necessary and proper to drain such lands by *covered, or open drains*, prior to the operation of sub-soiling. But even in wet lands, it would be found highly efficacious, because, although the operation might not be sufficient of itself, yet it would prove of infinite service. By deepening the soil, moisture, in times of drought, would be much longer maintained than in shallow tilth, as it is a well established fact, that its tendency is upwards, and that that tendency is encouraged by the voltaic action of the roots —therefore, as a necessary consequence, the plants would draw a supply from the sub-soil long after the moisture in the surface soil would have been abstracted by the sun and air.

Having thus briefly stated our views of the good effects of subsoiling, we would be permitted to ask some of our agricultural friends, to make experiments to test the efficacy of subsoiling. This may be done by subsoiling an acre of corn ground, and simply ploughing the adjoining acre, manuring and cultivating both alike, and measuring the product of each. We do not profess to be a prophet, but we will venture the prophecy, that the subsoiled acre would yield one-third more than the one which was not—and surely if an operation which will cost no more than the ordinary ploughing of an acre will add so much to the production of the soil, no man should hesitate to make an experiment, because his *interest*—that great lever which propels mankind onward to exertion—will be inevitably promoted by it.

Peaches—The crop of Peaches in Eastern Virginia, we learn, has been destroyed by the recent frosts, their fruit buds having been pushed forward by the mild weather of the winter.

Hatch's Seed and Plaster Sower—We have before called the attention of our readers to this invention, and the more we read of it, the more firmly are we convinced that our agricultural implement makers would find it to their interest to introduce it into this region of country. It is calculated alike for sowing all kinds of seeds and plaster, and so adjusted that the quantity can be regulated from *four quarts* to *four bushels*, per acre, with the advantage that *accuracy* can be ensured. And such is the rapidity of its motion that, with a horse to propel it, and a boy to drive, twenty acres can be well sown in a single day. With such a machine, so labor-saving in its qualities, no farmer need let his clover fields go unplastered, and we are sure that it only needs to be introduced, to render it an universal favorite with every one who properly appreciates the value of time, and studies economy, for it is eminently calculated to save the one and promote the other.

Extensive Sale of Short-horned Cattle.—E. P. Prentice, esq. near Albany, N. Y., distinguished as a breeder of improved short-horn Durhams, advertises in the New-York papers, a public sale of his *entire herd* of Cattle, "such a herd of improved Short Horns, as has never before been offered by any individual in this country"—the sale will embrace about 50 animals, Bulls, Cows and Heifers; all either imported, or the immediate descendants of those which were so, and of perfect pedigree. The sale will take place on the 25th day of June next.

As Mr. P's. reputation as an extensive importer and breeder is well established, it is superfluous for us to say that gentlemen who may desire to purchase *gude uns* will do well to attend, as the certainty of getting pure animals is guarantied by the high character of Mr. P. and the field of selection will be ample, many of the animals being distinguished for all the best points of their noble race.

Mr. *Howard*, one of the editors of the Albany Cultivator, and Mr. *A. B. Allen*, editor of the Agriculturist, offer their services to purchase for such gentlemen as may not find it convenient to attend the sale. Of these gentlemen it may be very truthfully observed, that they are excellent judges of cattle, and we will add, that every reliance may be placed on their exerting their judgment rightfully in behalf of those who may employ them.

Scotch Cattle—In Mr. Ellsworth's Report, Mr. Stephen Scott, who is well versed in all the peculiar properties of the various breeds of cattle, is inclined to think that some of the Scotch cattle are better adapted to a large portion of our country than any of the English breeds, though he thinks very highly of the Herefords and Durhams. The polled Galloways he believes would be particularly useful, and remarks, "they, like their countrymen, are hardy, and thrive almost every where, and are large enough for all purposes and pastures."

The Crops—The last Kent (Md.) News, says that the weather continues dry, and wheat and clover are much in need of rain.

The Easton (Talbot co.) Gazette says that the wheat crop presents a very promising appearance.

The Williamsport (Md.) Banner says: The grain crops of Washington county have never within our recollection, presented as beautiful and flourishing an appearance as at this time. They bid fair to yield the farmer a plentiful harvest.

Spent Tan and Saw-dust—In regard to the inquiry of Mr. Andrew Bush, Coventry, Pa. we remark, that tan has been found useful as manure, particularly for trees and shrubbery, after it has become well decomposed. It is also sometimes used in a fresher state, to keep up the heat in hot beds. Saw dust has been found very useful in ameliorating heavy or clayey soils. It makes also good bedding for horses or cattle, and when put in their stalls, is a convenient absorbent of urine.—*Cultivator.*

[Tan mixed with plaster, (or charcoal, or with equal parts of each,) and urine, would form one of the best composts that could be applied to stiff clayey lands. Say take 150 bushels of *tan*, 1 bushel of plaster, or the same quantity of charcoal, and 20 gallons of urine, incorporate the whole together, for every acre of ground, and a compost would be formed of great value for stiff soils—one that would be much better than 20 loads of stable manure.—*Ed. Amer. Farmer.*]

Which are the best breed of Hogs—Col. *Jacques*, of Massachusetts, a celebrated farmer and successful breeder, speaks thus of the Mackay and Bedford breeds of hogs:

"From my experience, I prefer the Mackay, next the Bedford breed. I consider the Mackay breed the best I have ever known, combining, in a great degree, early maturity, light offal, good shoulders, back of loins, holding their breadth remarkably well, from the joining of the head to the setting on of the tail, full breast, great depth in carcass, and better filled within, than any others I have ever seen opened; coats white and glossy, flesh firm and solid, and cooks with the least waste; skin or rind, when cooked, sweet, crumpy, and easily masticated, returning the greatest weight of pork for the given quantity of food, the steel-yard almost universally giving higher weight than the eye. The Mackays frequently, when killed and dressed at 12 months old, weighing 400 pounds, and when kept 18 months weigh from 5 to 600 pounds each dressed; they have been killed at 11 months old, weighing 400 pounds."

We have had frost for three days in succession, which we fear will prove injurious.

WHITMAN'S THRASHER, &c.—Mr. Whitman, who has within the last year established an Agricultural Implement manufactory in this city, has attracted considerable attention to his Thrasher and Horse Power, and is disposing of them quite rapidly to farmers in our own and the neighboring counties. We have not had an opportunity, as yet, of witnessing their operation, but from a number of testimonials of their efficiency, the following is presented to our readers, emanating from some of the most respectable farmers and planters of Prince George's County, Md.

April 1st, 1845.

To Ezra Whitman:

SIR—We regard your Horse Railway Power, in conjunction with your Thrasher, Straw Carrier and Fanning Mill, as constituting the desideratum which the farming interest has stood so long in need of—We regard the whole apparatus as combining in itself four desirable qualities, viz. durability, speed and neatness. We are satisfied that it is only necessary for the farming community to become practically acquainted with your machines to cause them to become universally adopted. The above conclusions are the result of our own observation, the machines having been fully and fairly tested in our service. Your friends and obedient servants,

JOHN J. JONES,
LUTHER D. JONES,
JNO. T. HOLTZMAN,
WM. F. HOLTZMAN,
SEPTIMUS J. COOK.

CULTURE OF INDIGO.

To the Editor of the American Farmer.

Sir: Presuming that some of your numerous readers are well acquainted with the most approved mode of cultivating Indigo, I beg leave to state that they will confer a favor on the South by giving a detail of it, through the medium of your useful paper. The best soils, mode of planting, tending, &c. A SUBSCRIBER.

We hope some of our friends will favor us with the desired information—In the meantime we will draw upon the Commissioner of Patents' last Annual Report, from which we extract the following paper, copied from the Farmers' Encyclopedia:

CULTURE OF INDIGO.

Indigo—(*indigofera*, from indigo, a blue dye-stuff—a corruption of *Indicum*, India, and *fero*, to bear. Most of the species produce the well known dye called indigo, the finest of all vegetable blues.) This is an extensive genus of rather elegant plants, the shrubbery kinds of which are well worthy of cultivation. The stone and green-house shrubbery kinds thrive best in a mixture of sandy loam and peat, and may be increased without difficulty by cuttings of the young wood planted in sand under a glass in heat. The annual and biennial kinds must be raised from seeds sown in a hot bed in spring; and when the plants have grown a sufficient height, they may be planted singly into pots, and treated as other tender annuals and biennials. The genus belongs to the natural order *leguminosæ;* hence the flowers resemble the pea tribe. The *vexillum* is round, emarginated; the heel furnished with a subulate spur on both sides; stamens diadelphous, style filiform, legume continuous, one or more seeded, two valved. The *indigofera cærulea* yields the finest indigo; the *I. argentia* an inferior kind, which comes from Egypt; the *I. tinctoria*, besides yielding indigo, is also medicinally employed; and the powdered leaf of *I. anil* is used in some diseases of the liver.—*Paxton*.

Indigo, when cultivated, thrives best in a free, rich soil, and a warm situation, frequently refreshed with moisture.

The usual course pursued for its culture is as follows:

Having first chosen a proper piece of ground, and cleared it, hoe it into little trenches not above two inches or two inches and a half in depth, not more than 14 or 15 inches asunder. In the bottom of these, at any season of the year, strew the seeds pretty thick, and immediately cover them. As the plants shoot, they should be frequently weeded, and kept constantly clean until they spread sufficiently to cover the ground. Those who cultivate great quantities only strew the ground pretty thick in little shallow pits, hoed up irregularly, but generally within four, five or six inches of one another, and covered as before. Plants raised in this manner are observed to answer as well as the others, or rather better; but they require more care in the weeding. They grow to full perfection in two or three months, and are observed to answer best when cut in full blossom. The plants are cut with reaping hooks a few inches above the root, tied in loads, carried to the works, and laid by strata in the steeper. Seventeen negroes are sufficient to manage 20 acres of indigo; and one acre of rich land, well planted, will, with good seasons and proper management, yield 500 pounds of indigo in twelve months; for the plant ratoons (stools, stoles, or tillers; *i. e.* it sends out stolones, or new growths) and gives four or five crops a year, but must be replanted afterwards.—*Browne*.

The process by which the blue coloring matter is extracted from the plant in Mexico, the East Indies, &c. is as follows:

The leaves are gathered at maturity, and immersed in vessels filled with water until fermentation takes place—The water then becomes opaque and green, exhaling an odor like that of volatile alkali, and evolving bubbles of carbonic acid gas. When the fermentation has continued long enough, the liquid is decanted and put into other vessels, where it is agitated till blue flakes begin to appear. Water is now poured in, and flakes are precipitated in the form of a blue powdery sediment; which is obtained by decantation, and which, after being made up into small lumps and dried in the shade, is the indigo of the shops. It is insoluble in water, though slightly soluble in alcohol; but its true solvent is sulphuric acid, with which it forms a fine blue dye, known by the name of liquid blue. It affords, by distillation, carbonic acid gas, water, ammonia, some oily and acid matter, and much charcoal, whence its constituent principles are, most probably, carbon, hydrogen, oxygen, and nitrogen. Indigo may be procured also from several other plants besides *indigofera tinctoria*, and particularly from the plant with the juice of which the ancient Britons stained their naked bodies, to make them look terrible to their enemies.

If this plant is digested in alcohol, and the solution evaporated, white chrystaline grains, somewhat resembling starch, will be left behind; which grains are indigo, becoming gradually blue by the action of the atmosphere. The blue color of indigo, therefore, is owing to its combination with oxygen.

Indigo is not cultivated to so great an extent in the U. S. as formerly, the imported article being obtained so readily. The following process of manufacturing indigo in small quantities for family use, is extracted from the Southern Agriculturist:

"Cut the indigo when the under leaves begin to dry, and while the dew is on them in the morning; put them in a barrel, and fill this with rain water, and place weights on it to keep it under water; when bubbles begin to form on the top, and the water begins to look of a reddish color, it is soaked enough, and must be taken out, taking care to wring and squeeze the leaves well, so as to obtain all the strength of the plant; it must then be churned (which may be done by means of a tolerably open basket, with a handle to raise it up and down) until the liquor is quite in a foam. To ascertain whether it is done enough, take out a spoonful in a plate, and put a small quantity of very strong lye to it. If it curdles, the indigo is churned enough, and you must proceed to break the liquor in the barrel in the same way, by putting in lye (which must be as strong as possible) by small quantities, and continuing to churn until it is all sufficiently curdled; care must be taken not to put in too much lye, as that will spoil it. When it curdles freely with the lye, it must be sprinkled well over the top with oil, which immediately causes the foam to subside; after which, it must stand till the indigo settles to the bottom of the barrel. This may be discovered by the appearance of the water, which must be let off gradually, by boring holes first near the top, and afterwards lower, as it continues to settle. When the water is all let off, and nothing remains but the mud, take that, and put it in a bag (flannel is the best) and hang it up to drip, afterwards spreading it to dry on large dishes. Take care that none of the foam, which is the strength of the weed, escapes; but if it rises too high, sprinkle oil on it."

Seven or eight species of indigo are found in the U. S. most of which are in the south. The wild indigo, (Dyer's *Baptisia*,) common in Pennsylvania and other middle States, yields a considerable proportion of blue coloring matter of an inferior kind.—*Flora Cestrica.*

FARMERS' DUTIES TO THEIR CHILDREN.

Hartford Co (Ct.) Agricul. Society—We have received the Transactions of this Society for 1843 and 1844—They contain much useful matter. A "Report on Blood Stock," by Chas. A. Goodrich, gives, in our opinion, a very judicious view of the subject of improving our neat cattle.

The address delivered before the society in Oct. last, by Ralph R. Phelps, esq. is really one of the most valuable productions of the kind we have ever seen. Whether we regard the subject matter, or the point and perspicuity of expression, it is, we might say, a *model*. We regret that the great press of communications, prevents our giving more than a brief notice. We must, however, find space for the following extract: Mr. Phelps observes—"It has been a source of complaint with farmers, that they must leave the farm for a profession, a clerkship, a trade, or even a pedlar's trunk or cart. This I consider a great evil, which demands a remedy."

After speaking of the causes of the evil, among which he enumerates false ideas of honor and respectability, "surly, morose, and scolding habits of parents," and "the rough, uncouth, and comfortless appearance of many farmers' houses and out-buildings, Mr. P. proceeds to point out a remedy as follows:

"Let no farmer's wife think her children too good to labor; but on the contrary, let her strive early to fix habits of industry. Let every mother teach her sons, that while labor on the farm is honorable, idleness, ignorance and vice alone bring reproach. And when this lesson is thoroughly impressed on the mind of her son, and corresponding habits are formed, that son will be likely to make an efficient man and a useful citizen, whether he be following a profession, or be engaged in the more safe and more pleasant pursuit of agriculture. But when the mother, without this lesson, and without these habits, undertakes to make her son a gentleman, she is far more likely to make him a loafer.

"Let parents labor to give all their children a good education. Let the absurd notion, that a farmer needs no education, be banished from every dwelling. There is no pursuit, where intelligence, and a well cultivated, and a well disciplined mind is more necessary, than in the proper management of the farm. Let the mind be enlarged by a knowledge of history, political economy, and especially the sciences connected with agriculture. Let the young farmer enrich his mind by general reading. Let him thoroughly understand our political institutions; and and be able to judge of his political rights and duties, without the aid of some demagogue, who had rather devote his time to watching over the public interests, than to the pursuit of honest industry. In short, let the farmer be able to reason, to examine and to judge for himself, and he will soon take the elevated rank in society to which his calling entitles him, and he will no longer have the opportunity of complaining that professional men have too much influence. This will have a great tendency to attach farmers' sons to their homes and to their farms."—*Albany Cultivator.*

Burning Stubble Ground—In conversation with a farmer the other day, he stated that he thought he had received much benefit from burning over a piece of stubble ground. It caught fire by accident, from some bushes that he had cut and was burning; and the field, being dry, the fire run over it and burned the stubble pretty clean. It was sowed the spring following to grain of some sort (we did not learn what,) and it was found that the ashes were a good dressing, and improved the crop of that year, and the grass which followed.

The plan of burning stubble was practised much in olden times. Old Virgil said, or sung, about it more than eighteen hundred years ago:

"Long practice has the sure improvement found,
With kindled fires to burn the barren ground;
When light the stubble, to the flames resigned,
Is driven along and crackles in the wind."

Beatson, in his new system of cultivation, mentions the practice of a Mr. Curtis, of Lynn, Norfolk, (England,) as follows: His stubble was shorn and left about 18 inches high, and so completely set fire to as to consume every particle that appeared upon the surface. This operation, says he, destroyed every weed and seed that grew, leaving the surface entirely covered with ashes; the consequence was, that his crop of wheat proved extremely advantageous, its produce being full four quarters per acre. Moreover, his land, treated in this manner, was remarkably clean and free from weeds.—*Western Farmer.*

Rural Economy of the South—We make the following extracts from a letter of Mr. Thomas Affleck, to the editor of the Albany Cultivator, dated Washington, Miss. Nov. 16, 1844:

Bread, meat, and clothing, every cotton plantation *should and can* furnish for its own consumption, and even for sale, and yet grow as much cotton as should be grown—In fact, there is not a doubt, but if such a system could be generally introduced, cotton would again command a remunerative price. Other items should be included—comforts instead of blankets; leather for shoes and harness; tobacco for the negroes; bagging made at home, of cotton; hay grown for stock and for sale; all the mules and horses needed, raised at home; a flock of sheep kept, sufficient not only to clothe the negroes, but to afford a considerable return for wool and mutton; butter made for sale, the buttermilk being decidedly more wholesome for the negroes, young and old, than sweet milk, especially in summer, and any tidy old woman can easily make more in the dairy than in the field; and many other ways in which hands can be employed to at least *as great advantage and profit* as in the cotton crop—with the very great additional advantage of thereby lessening the ruinous overproduction of that staple.

Clothing requires time and attention; but there is nothing else needed to enable any force of negroes to manufacture the material for their own clothing, *with profit* to their owners. During winter the women cannot be so well employed in any way as in spinning up the wool, particularly where a carding machine is accessible. One woman, keeping a spinning machine and a loom going all the year, would spin the warp and weave the cloth for a very large place. Those spinning machines are a great convenience—they spin six threads at a time—the gin-saws taking the cotton from the seed—the brush placing it on the cards when ginned, where it is carded, and then spun direct from the cards, all at one operation. Mine cost $130. We have now, in Natchez, a very excellent manufactory established, and now in the hands of a most energetic business man—Mr. M'Allister, of the firm of M'Allister & Watson—who is proving that such a concern will succeed in the South, afford a profit to the manufacturer, and be a great source of convenience and economy to the planter. Linsey, jeans, all kinds of cotton goods, including *bagging* and sacking, bale rope and twine, &c.—Also *burring* and carding wool at so much per pound.—Mr. McA. began by pledging himself that he would manufacture for the planter, from his own cotton and wool, fabrics of any kind to cost him, at least, *no more* than he could buy it for of Northern manufacture, allowing a fair price for the raw material. The cotton bagging made for Mr. Isaac Dunbar, out of most indifferent cotton, worth perhaps one or two cents per pound, is a very superior article—better, in the opinion of many, than the hemp article. I have very little doubt that the cotton shipped from Natchez will be, half of it, put up next year in bagging of cotton—if the planters consult their own interest they will do so. If all the cotton made in the Union was packed in this material, we would have the crop lessened or consumption increased rather, to the amount of 22,500,000 pounds, or 56,250 bales; being five yards of bagging, weighing nine pounds, for two and a half millions bales. Bale rope and twine would swell the amount to over 70,000 bales.

Mrs. A. is just finishing off a lot of over 50 double and single comforts for the negroes, in place of blankets, which cost an average of about $1 12 each."

Different Qualities of Honey.

Among all the treatises on the subject of bees that have come under my notice, I do not recollect one in which the different varieties and qualities of honey have been particularly noticed and described. It is a matter of surprise to me, as honey is obtained from so great a variety of flowers, possessing in themselves properties so various, that if there be any difference, there should not be as many kinds as there are plants producing it. But this does not seem to be the fact. In all that I have yet seen made at the north, I have been unable to discover but four distinct kinds; though some of them differ considerably in quality in different seasons.

1st Quality.—The first honey collected—and I think the richest and most valuable sort, is obtained in April and May, in this latitude (42°,) principally from the blossoms of fruit and forest trees. It is of an amber color—very heavy—being nearly of the consistence of tar, and possesses a peculiar aromatic flavor. The comb in which it is deposited is of a light straw color, and is thicker, that is, there is a greater proportion of wax than in the other kinds. It is collected in comparatively small quantities, or it is deposited in the lower apartments of the hive, so that but little of it ever gets to market in a pure virgin state. We once, however, had a globe containing nearly 20 lbs. filled with it (taken of course from one hive,) while residing in Connecticut.

2d Quality.—The next variety to be noticed, is collected at the same season of the year as the first mentioned, and is deposited in the same kind of comb, has a similar though rather higher flavor, and is not only as thick, but nearly as black as tar; but it is obtained in still smaller quantities than the first.

3d Quality.—The next in order is taken in June and July. This is always of less specific gravity than the two former, though it differs more in this respect than any other kind in different seasons. Sometimes it is so thin and watery as to ferment and become sour when it runs from the cells; and even in such cells as are uncapped. It is destitute of the rich flavor of the early made kinds, but looks better, being almost colorless, and is in thinner, whiter comb, and on account of its fine appearance brings a better price in market. It is indeed preferred by some for its taste, while others consider it the most inferior of all. This is the kind so well known as white-clover honey, and is doubtless principally obtained from that plant.

4th Quality.—The next and last to be described, is made later in the season from buckwheat. Of this there is no doubt, and one who keeps bees need not be told when the fields of this grain are in blossom, though he be totally blind, provided his olfactories are unimpaired, on going within a few rods of his apiary. The strong odor that is emitted from the hives reveals the fact to a certainty, though there be none growing within the distance of a mile. The honey, however, loses this rank smell in a great degree in a few weeks, and is then preferred by many to the white clover. Its color is a dark brown; but the comb containing it is the whitest of all, and is so very thin, that in some cases where the cells are deep, a piece containing a pound of honey, would not I think, weigh more than one fourth of an ounce, that is, not more than one sixty-fourth of the whole is waste. This variety is generally heavier than the white clover, but less so than that from fruit trees.

The different kinds of honey are seldom if ever mixed at all in the cells; nor are the cells filled indiscriminately in the sheet; but each kind is by itself, so that a sheet of comb containing two sorts, can be divided with a knife so as to separate the kinds.

In order to obtain all the varieties pure in boxes, the hives should be in good condition in early spring. They should not be much exhausted of honey, and well stocked with bees. In order to keep them in this condition, it is better to remove them to some warm out-building, or dry cellar, where they will not experience the great changes of temperature to which they are exposed if left in the open air in winter. If well managed, the avails of the apiary are a profitable item of farm produce.

H. Carpenter.

Poughkeepsie, Jan. 16, 1845. [*Amer. Agri.*

Fat Animals.

We noticed the carcasses of some remarkable cattle, sheep and hogs, exhibited in the Centre Market in this city, on the 22d of February. There was the Durham ox, not quite six years old, which received the first premium on fat oxen at the Poughkeepsie State Show, bred and fatted by D. D. Campbell, Esq, of Schenectady, which weighed as follows:

Live weight,	2,546 lbs.,
Beef—four quarters,	1,726 "
Hide,	121 "
Loose fat,	255 "
	2,102 lbs.

A spayed heifer, between four and five years old, bred and fattened by P. N Rust, of Syracuse, weighed—

Four quarters,	1,226 lbs.,
Hide,	84 "
Loose fat,	180 "
	1,490

This remarkable animal was said to have descended on one side from some cattle imported from Holland, several years since, by Mr. Linklean, of Madison county; but her fine bone, symmetry, and color, strongly indicated a mixture of Durham and Devon blood. We believe that she had always been kept in the stable; and we would suggest the query, whether this circumstance had any influence in lessening the weight of the hide? which it will be seen was of uncommon lightness.

Among the sheep, we noticed the carcass of a cross-breed South Down and Leicester wether, bred and fed by P. N. Rust; the neat weight of which was 183 lbs.—or over 45 lbs. per quarter.

All the above animals were exhibited at the stalls of Kirkpatrick & Co.

At the stall of McGuigan & Walsh, we observed the carcass of a Cotswold wether, weighing 172 lbs., fatted by Mr. Knickerbacker, of Schaghticoke. This was a most extraordinary carcass of mutton, exceeding anything we had before seen in weight, in proportion to bone.

But the greatest wonders and curiosities were in the *Pork* Department. Mr. G. Swartz exhibited the carcasses of three hogs—one of which, 2 years 7 months old, weighed 975 lbs! Another—of the Berkshire breed, a well-formed and symmetrical animal, 2 years 3 months old, 725 lbs. Another, ten months old, showing much China blood, 400 lbs., as perfect a pig as could well be imagined. The largest hog was said to be of the "Byfield breed," but it is evident that the blood of some larger and coarser breed must have predominated.

It may be interesting to compare the weights of these animals with some which have carried prizes at shows in England. The London Farmers' Journal gives the weights of some of the prize oxen, sheep, and pigs, which were exhibited at the last Smithfield Show. Of the cattle, the weight of the beef and loose fat or tallow only is given.

A four yrs. old Durham ox—

Quarters,	1,768
Loose fat,	192
	1,960

A four year old Hereford ox—

Quarters,	1,590
Loose fat,	192
	1,782

Another Durham ox 4 years old, weighed—

Quarters, only—	1,840 lbs.

The weight of Mr. Campbell's ox, compared with these—that is, the beef and tallow only—was 1981 lbs.—but there was a difference of near two years in his favor.

The weights of no Cotswold or other long-wooled sheep are mentioned. A South Down wether, bred by the Duke of Bedford, weighed 172 lbs.—or 43 lbs. per quarter.—*Albany Cultivator.*

A Corn Plow.—In passing through Butler County, Ohio, on my way to Kentucky, in the month of August, last, I called on Dr. Keever, an extensive farmer as well as skilful physician and surgeon, with a very extensive practice. I asked him to write out the result of some of his farming operations for your paper, which he promised he would; but as they have not appeared, I suppose he has not been able to spare the time from the multiplicity of his cares to do so. I saw an implement of husbandry at his farm of too much importance to remain unnoticed, as it ought to be in use wherever the corn crop is extensively cultivated. It was a plow with two shares, with a pole connected to the frames in the centre, like that of a wagon, worked with two horses. The shares were so constructed that they could be shifted either way, thus throwing the dirt to or from the corn, at pleasure, or both sides of the row at the same time. It did the work to great perfection, and twice as fast as a single plow would have done it. I hope Dr. K. will find time to send you a drawing of it, and give a description of some other curious inventions, as well as of that of his farming in general. He is an intelligent and ingenious man, and ought to be willing to let others share with him, inasmuch as nature has done more for him than the great majority of us less gifted.

A Traveller.

[*Amer. Agri.*

"On the banks of the Elbe, in Holland, in the neighbourhood of Arnheim, the meadows are depastured during one year, and cut, and their produce made into hay the following year, and so on alternately. The cattle are fed in the house with the hay during the winter."

THE TOBACCO TRADE.—Great Britain has determined to make no change in her Tobacco duties. It was anticipated she would tax strips very heavily in order to transfer the labor of stripping to her own people as an additional source of occupation. Her declining to do this will continue the business here, and our merchants will go on to put up strips for the English Market.

We learn that our townsman, Mr. JAMES GRAY has contracted for some 4,000 hhds. of Virginia Tobacco, to be supplied to the French Government, at prices that will nett about $7 50 a $8. Mr. G. is also the agent for the purchase of Tobacco for Italy. These orders being in his hands may lessen competition for the particular sorts wanted; but it is conjectured fair prices will be paid. The Enquirer says:—*Rich. Compiler.*

"Our manufactures have increased their work, and are paying good prices. Our best tobaccos are now bought by our manufactures for the French and Italian markets, where, we are told, they want a rich, leafy, smooth, pliant tobacco, put up in order to keep sweet, but not very dry. It is now about prizing time, and the planters will do well to attend to this in preparing their crops for market."

Cement for earthen pipes—A mode of cementing earthen pipes for conveying hot water, is given by a correspondent of the London Gardener's Chronicle, as follows: Take one pint of sweet milk, nearly two pints of buttermilk, mix the milks, and put them on a slow fire till they turn into curd; then strain them and save the curds. Previously get some good roche lime, pound it fine, and sift through a fine sieve. Mix the lime with the curd well, until it is tough, and then dilute the joints of the pipe well with it; the pipes should be dry when the cement is applied. It will be sufficiently hard in a few hours, and it is said will not be affected by hot water. More cement than can be used in half an hour ought not to be made at a time, as it will get so hard as to be unfit for use.

Scarcity of Beef—We have been under the impression that the scarcity and high price of beef in this city was occasioned by the large quantities used by the packers—But we learn from Lyford's Journal that salted Beef is equally scarce, and that "the whole stock, which is principally held by two houses, does not probably much exceed 2000 bbls. of the three qualities, and that these are kept chiefly for the supply of ship's stores. The overstocks of previous years, and the losses thereby sustained, induced packers last season to operate probably too cautiously for their interests."—*Balt. Sun.*

An able letter addressed to Lord Ashburton, on the importance of introducing Indian Corn into England, has been published in the New York Albion, by J. S. Skinner, esq. who has been engaged by the editors to edit the Agricultural department of that valuable paper.

The writer of the letter very earnestly urges upon the attention of the British statesmen the importance of admitting Indian Corn from the United States into Great Britain, *free of duty.* Wheat now, he says, forms no part of the diet of the laboring classes; so that the free admission of maize would not materially impair the consumption of English wheat flour.

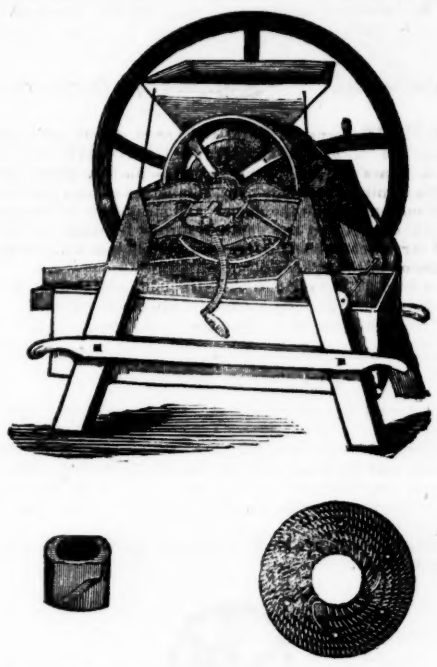
Farmers, make your own Candles.—Take two lbs. of alum for every ten lbs. of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm. —*Maine Cult.*

If the wick be dipt in spirits of turpentine, the candles will reflect a much more brilliant light.—*Ed. Am. Farm.*

SUGAR.—The Baton Rouge Advocate states that the experiment of raising sugar in the highlands of Louisiana —hitherto deemed chimerical—has been altogether successful, and that planters are now turning their attention to the subject.

Making Prairie Ditches.—A machine has been invented in Chicago which promises to supersede the use of spades. By the assistance of two yoke of oxen and two men, it will cut a ditch two feet deep by three feet at the top, and eighteen inches at the bottom, at the rate of 2000 rods per day.

SINCLAIR, JR. & CO'S CORN & COB CRUSHER.

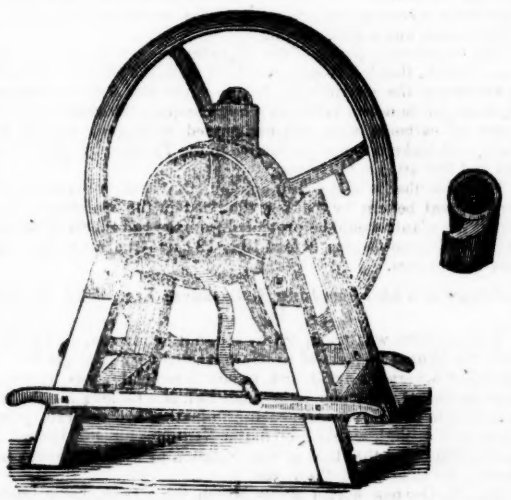


The above cut represents Sinclair & Co's new Corn Mill which is admirably adapted for plantation use, or as a Maryland planter says of them, "every planter having this useful machine becomes his own miller." They grind coarse or fine meal with equal facility, perfection and despatch, at the rate of 2½ or 3 bushels per hour.

When the screen is attached (as shewn in the centre of the cut) and fine meal is required to be ground, it will be necessary to drive the Mill by horse-power, (say 2 horses;) coarse meal for horses may be ground by 2 men with good success.

The grinding plates which are made of the hardest composition metal, will last about 2 years without renewing; after they are worn smooth new ones may be put on without difficulty. A feeder is attached to the axle which is intended to pass the grain into the plates at regular intervals. The feeder is important and obviates the difficulty and objection to Cast Iron Mills generally. Price, with one sett extra plates $40

☞ The feeder and grinding plate (as above) are represented separate from the mill.



The above cut represents Sinclair & Co's. Corn and Cob Crusher, which is admirably adapted for plantation use, the construction is very simple, compact, and not easily put out of order. The grinding plates are made of the hardest composition metal, which will last from two to three years. After they are worn smooth new plates may be substituted without difficulty; on the axle is attached a strong spiral knife, which cuts the cob in small pieces, preparatory to entering the plates. Price with one sett extra plates $30

☞ The knife (as above;) the grinding plates similar to hat of the Mill.

CLEAZY'S IMPROVED SELF-SHARPENING PLOUGH.

J. S. EASTMAN, Pratt street, a little west of the Baltimore & Ohio rail road Depot, would invite public attention to this superior implement, both as to its simplicity, cheayness and good work with light draft. He will furnish patterns to manufacturess living out of this state on reasonable terms. may 1

BALTIMORE MARKET, April 10.

Beef, Balt. mess,	10a11	Butter, Glades, No. 1,	13
Do. do. No.1,	9	Do. do. 2,	7a11
Do. prime,	a7	Do. do. 3,	5a7
Pork, mess	13	Do. Western 2,	6a
Do. No. 1	12	Do. do. 3,	5a6
Do. prime	a11	Lard, Balt. kegs, 1,	a7½
Do. cargo,	a	Do. do. 2,	none
Bacon, hams, Ba. lb,	8a6	Do Western, 1,	8½a8¾
Do. middlings, "	7	Do. do. 2,	5a5½
Do. shoulders, "	9a	Do. do. bls 1,	6a6¼
Do. asst'd, West.	6¼	Cheese, casks,	6
Do hams,	8a	Do. boxes,	5a8½
Do. middlings,	5¾	Do. extra,	12a15
Do. shoulders,	5¼a		
COTTON—			
Virginia,	9a10	Tennessee, lb.	
Upland,	6¾	Alabama,	6¼a7
Louisiana,	6¾	Florida,	10a12
North Carolina,	10a11	Mississippi	
LUMBER—			
Georgia Flooring	12a15	Joists & Sc'ling, W.P.	7a10
S. Carolina do	10a12	Joists & Sc'ling, Y.P.	7a10
White Pine, pann'l	25a27	Shingles, W. P.	2a9
Common,	20a22	Shingles, ced'r,	3.00a9.00
Select Cullings,	14a16	Laths, sawed,	1.25a 1.75
Common do	8a10	Laths, split,	50a 1.00
MOLASSES—			
Havana, 1st qu. gl	30a31	New Orleans	26a28
Porto Rico,	29¾a	Guadaloupe & Mart	26a28
English Island,		Sugar House,	28a36
SOAPS—			
Baltimore white,	12a14	North'rn, br'n & yel.	3¼a4½
brown & yell'w	4½a5½		
TOBACCO—			
Common	2 a 3½	Yellow,	8 a10
Brown and red,	4 a 5	Fine yellow,	12a14
Ground leaf,	6 a 7	Virginia,	4 a 9
Fine red	6½a 8	Rappahannock,	
wrappery, suitable for segars,	8a13	Kentucky,	3 a
Yellow and red,	7a10	St. Domingo,	13 a11
		Cuba,	15 a38
PLASTER PARIS—			
Cargo, pr ton cash	3.50a	Ground per bbl.	11.2a
SUGARS—			
Hav. wh. 100lbs	9a10.50	St. Croix, 100lbs	7.00a8.00
Do. brown	a7.50	Brazil, white,	a
Porto Rico,	6.75a	Do. brown,	
New Orleans,	5a 5.75	Lump, lb. c.	
FLOUR—We quote			
Superfine How. st., from stores, bl			$4.50a
Do. City Mills,			4.75
Do. Susquehanna,			4.62
Rye, first			3.18a
Corn Meal, kiln dried, per bbl.			2.25
Do. per hhd.			11.75
GRAIN—			
Wheat, white, bu	105a115	Peas, black eye,	50a55
" best Va red	95a100	Clover seed, store	$4.12
"ord. to pri. Md	85a105	Timothy do	24.a2.50
Corn, white,	39a40	Flaxseed, rough st.	1.25
" yellow Md.	43a44	Chop'd Rye, 100 lbs.	1.25
Rye, Md.	63a64	Ship Stuff, bus.	20a
Oats, Md.	24a	Brown Stuff,	15a
Beans,	110	Shorts, bushel,	10a
FEATHERS—per lb.			31a
COFFEE—			
Havana,	7 a 8	Java, lb.	10 a12
P. Rico & Laguay.	5⅛a6¼	Rio,	6¼a7¼
St. Domingo,	5¾a 6	Triage,	3½a 4¼
CANDLES—			
Mould, common,	a10	Sperm,	30a31
Do. choice brands,	10½	Wax,	60a65
Dipped,	a 9		

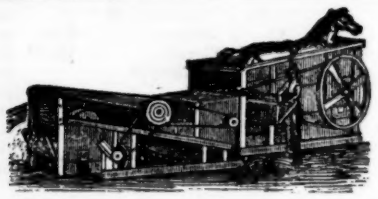
Tobacco—the transacti'ns in Maryland this week are very large, embracing almostall the receipts, and a portion of the stock previously on hand. Prices, however show little or no change; and as there is a considerable disappointm't in regard to the quality of the crop—the proportion of common being much larger than was at first supposed, it is found difficult, rather, to maintain former rates. We quote as before, viz. inferior & com. $2a3; middl'g to good 3.50a 5; good $6a7. 50, and fine 8 a14. The receipts of Ohio which are rather large this week, show the quality of the crop of Ohio to have been overrated. Sales of this descript'n are also to a fair extent at former rates, viz. com. to mid. $3a4.50; good 5a6; fine red and wrappery 6.50a10; fine yellow $7 50a10, and extra wrappery 11a13. The inspections of the week are 448 hhds. Md. 362 do Ohio; 81 do Ky. and 15 do Va—total 906 hhds.

Grain—No wheat of consequence has appeared at market for a day or two; we quote good to prime Mar'nd reds at 95a100 c. received in small parcels by wagons.

AGRICULTURAL IMPLIMENTS.

J. S. Eastman at his old stand (now No. 180 Pratt Street between Charles & Hanover Streets) has on hand a very heavy stock of AGRICULTURAL IMPLEMENTS, consisting of a great variety of Plows & Plow Castings (which are equal to any made in this country) Wheat Fans, Cylindrical Straw Cutters, Horse powers and Thrashing Machines, Corn and Tobacco Cultivators, plain and expanding, Harrows, Farm Carts, Corn Planters of various patterns, and a great variety of other articles, all of which are made of the very best materials both wood and Iron, and in a faithful manner, which will be sold exceedingly low, as he is desirous of disposing of his present stock on hand. Very liberal discount to wholesale purchasers.

Also a good supply of Landreth's superior Garden seeds in store, fresh and genuine. ap 9



WHITMAN'S AGRICULTURAL WAREHOUSE,

No. 2, Eutaw Street, opposite the Eutaw House.

The subscriber feels very grateful for favors the past season, and will now inform his friends and the public, that having enlarged his business, he is now prepared to keep on hand and Manufacture to order, nearly all articles used in the Farming line. Also will keep on hand, an assortment of FIELD & GARDEN SEEDS, IRON, NAILS, HARDWARE, &c.

LIST OF CASH PRICES.

Two Horse Railway Powers, on an improved plan,	$100 00
One Horse " " "	75 00

These Powers work with more ease to the horse, are more durable, and one or two horses on these Powers will do about double the work the same number of horses can on the common sweep Powers. They are portable, and only occupy about one-eighth the room of the Sweep Powers—they are used for driving various kinds of Machinery as well as for Thrashing.

New Threshing Machine, patented March 4th, 1844,	$100 00

These machines Thrash and clean the grain at one operation, and with one of my two horse Powers, five men will thrash and clean from ten to twenty-five bushels of wheat the hour; they are simple and durable, may be used in the field or barn, being but very little larger than the common Thrasher.

☞Rights for Southern and Western States which are not sold, can be had by applying to the subscriber.

Improved Thrashers with Straw Carriers, from	$50 to 75
Thrashers, - - - - -	35 to 60

These Thrashers are more durable and will thrash one-third faster with the same power, than any other now in use.

The Rice, Lomax and Hayford Fanning Mills from	$15 to 30
Clark's Smut Machines from	60 to 100
Corn Shellers "	12 to 45
Cutting Boxes for hand or horsepower	5 to 50
Corn and Cob Crushers,	22 to 50
The Wiley or Mott Plough, all sizes	4.50 to 10
The Davis, Empire and a variety of other ploughs,	4 to 12
Prouty & Mears Centre Draught,	7.50 to 13
Corn and Tobacco Cultivators,	4 to 6
Harrows of all kinds,	6 to 20
Trucks for stores,	5 to 10
Premium Pumps, a new article,	5 to 8
Lukens' celebrated Washing Machine	15 to 25
Horse Rakes,	10 to 12
Ox Yokes and Bows,	4 to 6
Grain Cradles with Scythes or without	2.50 to 5

And a variety of Scythes, Sickels, Hay Rakes and Forks, Hoes, Shovels, Spades, Manure Forks, Axes, Hatchets, Hammers, Grindstones, Wire Sieves, Wove wire of all descriptions, &c. &c &c.

Also, the New York Castings, for the Mott or Wiley Plough, by the piece or ton. Castings for other Ploughs kept constantly on hand, and all kinds of REPAIRING done at short notice and on reasonable terms. EZRA WHITMAN, Jr.

Church Clocks for Steeples with 1—2—3 or 4 pair of hands made to order and warranted.

april 9th.

NORTH DEVON CALVES.

The subscriber offers for sale 4 Full Blood North Devon Bulls, and two Heifer Calves, two of the Bulls are 5 and 6 months old, price $25 each; the two other Bulls are 11 months old, price $30 each; one of the Heifers 12 months old, price $30; the other Heifer 18 months old, price $40; they are beautiful animals, in fine condition, and of a suitable age to ship.

Address JOHN P. E. STANLEY,
46 South Calvert, corner of Lombard Street, Baltimore.

ap 9

RARE CHANCE FOR A DAIRY-MAN.

A gentleman in Carlisle, Pa. wishes to engage with a competent person to take charge of a Dairy and Truck Farm on shares—The farm is of 60 to 70 acres, partly within the borough, in excellent order; there is no opposition to the dairy, and the only one to the truck business is from a borough 20 miles off. The stock of every description will be furnished—there is a fine stock of Cows and Horses, and all the apparatus for carrying on the business, and excellent dwelling, barn, stabling, and root cellar. Nothing would be required of the person engaging except the labor, and he ought to have about $200 in cash. Apply to the editor of the American Farmer, if by letter, post paid. None but those who can produce unquestionable reference as to charactor and qualifications need apply. fe 26

POUDRETTE.

Those intending to try the Poudrette on corn this season, are invited to forward their orders at once, as the consignment on hand will be the last in time for planting. Apply at this office.

Pulverization.  *Decomposition.*

A. G. MOTT. corner of Eutaw and Forest streets sole agent for the sale of the "BOSTON CENTRE DRAUGHT PLOUGH," Prouty & Mears' self sharpening patent, with new patent gearing.

By this admirable arrangement, the labors of man and team are lessened one half, while the power and steadiness of draught obtained are so great that any depth of furrow is broken up, pulverized, and carried completely over, with perfect ease and facility, and the precision of the spade,

Prices from $7.50 to $13, with extra point and share. No extra charge for the new gearing. Castings always on hand.

"Spade labor, the perfection of good husbandry."

mh 5 tf

PRICE 100 DOLLARS.

Reaping machines simplified, and their durability very greatly increased, will cut as fast as any I made prior to 1841; two horses are geared abreast, and are relieved from the once objectionable weight, and the draught is very much diminished. The value of this late improvement has been tested by Wm. Butler and Jacob Staley, of Shepherdstown, Va. who if applied to will give it the highest character.

The large Reapers are made as usual at $170—medium size will be made to order.

My Corn and Cob Crusher, so well known in the South, stands unrivalled—price $25 to $35. OBED HUSSEY.

Baltimore, Jan. 7, 1845. ja 9

HAUTERIVE'S CHEMICAL SOLUTION,

FOR THE IMPROVEMENT OF

Wheat and other Seeds.

The subscriber being the only possessor in the U. States, of the recipe for preparing HAUTERIVE'S CHEMICAL SOLUTION, for which the Society of Encouragement and Agriculture of France, after testing the value of it for three consecutive years, through a commission composed of Scientific Agriculturists and Chemists and after their favorable report, awarded the inventor a premium of 3 000 francs, and a gold medal.

The stimulatimg power of the ingredents composing this Solution, is such, that by steeping the Seed in it, the effect is not only to accelerate the germination, but to render the Vegetation more vigorous, by its useful action as a hygroscopic; the gaseous emanations of carbonic acid, and carbonated hydrogen, nourish the plant, and make it more productive to the Farmer, by preventing rust and the attacks of insects.

The subscriber is of the firm opinion, that cotton planters may derive great benefit by soaking the Seed in the Solution; by so doing, the plants would be protected from the bad effects of insects, and *it will hasten the crop at least* 10 *or* 12 *days*—the soaking to last only three hours.

Extract of a letter from JOHN S. SKINNER, Esq., *dated February* 15, 1845.

Your solution was tried, not by me, but by my son, F. G. Skinner; the Wheat he steeped in it, was sowed very late, yet he says the effect is very apparent and highly beneficial But you need have no better recommendation than Col. N. Goldsborough, who is known to be a farmer of nice discrimination and accurate judgement, and withal, would not flatter Neptune for his trident. I shall recommend the trial of the Solution to all my friends, next Spring, for their Oats, Corn, &c.

Col. N. GOLDSBOROUGH writes March 6th, 1845, three bushels were seeded in stiff white oak land, and here I have every reason to be well satisfied with the experiment; the Wheat came up three days earlier, and grew with astonishing vigor, and has maintained a superiority over the adjacent Wheat, which was brined and limed and seeded the same day in land of the same quality. It has constantly appeared thus far as if the land in which the Wheat steeped in the Solution was seeded had been manured, and the other not; whereas the whole was dressed the preceding Spring with barn yard manure, &c.

Commodore JONES, U. S. NAVY, writes: "As to the effects of the Solution on the growing crop, &c. I think very favorable. It has added much to the appearance as well as to growth, &c. (Order, double the quantum used last Fall.")

Many other "opinions" can be seen by calling upon the Agent. We cite the above as from gentlemen well known, and on whom great reliance can be placed.

F. W. SWEENY,
No. 54 Buchanan's Wharf,
Is appointed my Sole Agent, for the disposal of the Chemical Solution,—to whom all orders can be addressed.
☞Price $3 for Half, and $5 for Whole Barrels.
L. MONTROP.

Baltimore, March 26th, 1845. A*

AULT'S ENGLISH GARDEN SEEDS.

Just received by the steam ship Hibernia our usual supply of first rate ENGLISH GARDEN SEEDS, consisting in part of the various kinds of Cabbage; Cauliflower; Brocali; Peas; Beans; Lettuce; Carrot; Parsnip; Radish, Beets, &c. &c. It is a fact well known to every gardener of experience that first rate English Garden Seeds produce incomparable better crops and of finer flavor than can be obtained from Seeds raised in this climate; and as we receive these Seeds direct from the growers, who are gentlemen of undonbted respectability and experience, there never has been or will be any mistake or deception in quality or kinds of seed. The present lot are in remarkable fine condition, having been on the water only 15 days. For sale wholesale and retail by

SAML. AULT & SON,
N. W. corner Calvert and Water sts.

mh 26 4t

NEW AND IMPROVED POUDRETTE,

Made by the Lodi Manufacturing Company of New York, may be obtained by application to BRICE & SMITH, Agents,
fe 20 3m No. 6 Bowly's wharf, Baltimore.

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

D. K. MINOR, Agent.

A supply now on hand from the N. York establishment, by the single barrel, or larger quantity. For sale by

SAML. SANDS,
je 19 office of the Farmer, Baltimore

PORTABLE TUBULAR STEAM GENERATOR.

The undersigned *successors to the late firm of Bentley, Randall & Co.* are manufacturing, and have constantly on hand a full assortment of the above Boilers, which within the last few months have undergone many improvements: we can now with confidence recommend them for simplicity, strength, durability, economy in fuel, time, labor and room, to surpass any other Steam Generator now in use. They are equally well adapted to the Agriculturist for cooking food for cattle and hogs, the Dyer, Hatter and Tanner for heating liquors, to Manufacturers (both Cotton and Woollen) for heating their mills, boiling sizing, heating cylinders, &c., to Pork Butchers for heating water for scalding hogs and for *rendering lard*, to Tallow Chandlers for melting tallow by circulation of hot water (in a jacket,) to Public Houses and Institutions for cooking, washing and *soap making*, and for many other purposes, for all of which they are now in *successful* operation; the economy in fuel is almost incredible; we guarantee under all circumstances a saving of *two thirds*, and in many instances *fully three fourths*—numerous certificat s from the very best of authority can be produced to substantiate the fact. We had the pleasure of receiving the premium for the best Steam Apparatus at the Agricultural Fair held at Govanstown in October 1843.

Manufactory, McCausland's old Brewery, Holliday st. near Pleasant st., Baltimore, Md.

Dec. 6. tf RANDALL & CO.

JAMES MURRAY'S

PREMIUM CORN AND COB CRUSHERS.

These already celebrated machines have obtained the premium by a fair trial against the other Crushers exhibited at the Fair held at Govanstown, Balt. co. Md. Oct. 18th, 19th and 20th, 1843, and the increased demand enables the patentee to give further inducements to purchasers by fitting an extra pair of grinders to each machine without extra charge. Prices $25, 30, 35, 40, 45.

ALSO, small MILLS, which received a certificate of merit, for $15.

I have also superior CUTTING BOXES, such as will bear inspection by either farmers or mechanics.

Also, Horse Powers, Mills, Corn Shellers, Mill and Carry-log Screws, small Steam Engines, Turning Lathes, &c. &c.

Also, a second hand Steam Engine, 16 horse power, and the works for two Saw Mills.

Any kind of Machine, Model or Mill-work built to order, and all mills planned and erected by the subscriber, warranted to operate well.

☞Orders can be left with J. F. Callan, Washington, D. C. S. Sands, Farmer office; or the subscriber,

Mr. Abner Linthcum, jr., and all Machinests are invited to a fair trial of Grinding against my Corn and Cob Crushers, and if I do not do more work, taking the power, quantity, and quality into consideration, I will give them my machine gratice.

Patent Rights for sale by the subsbriber.

o 8 JAS. MURRAY, Millwright, Baltimore.

EXTRA RASPBERRIES.

The subscriber will sell several thousand fine ROOTS of the celebrated Raspberry introduced into this State by the late William Gibson, and which have been generally known in Baltimore and the vicinity as the "GIBSON RASPBERRY."

Orders for plants of this delicious and productive species—the genuineness of which may be relied on—left at No. 7 North Charles street, will be promptly executed at the following prices, viz:

100 roots for	$6
1000 do	$50

Carefully put up and delivered in any part of the city.

JOHN GIBSON,
ap 2 3t Chestnut Hill.